PUBLIC WORKS/HYDROLOGY

D20/D3B1

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D20/D3B1

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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 25, 1991

Fred Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street, NE
Albuquerque, New Mexico 87108

RE: REVISED DRAINAGE PLAN FOR ROTARY PARK AT HERITAGE EAST
(D-20/D3B1) ENGINEER'S STAMP DATED NOVEMBER 12, 1991

Dear Mr. Arfman:

Based on the information provided on the referenced submittal received November 12, 1991, the plan is approved for Grading/Paving permit.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

Gilbert Aldaz

Gilbert Aldaz, P.E. & P.S.
Civil Engineer/Hydrology

GA
wp+2939

25 x 10

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DRAINAGE INFORMATION SHEET

PROJECT TITLE: ROTARY PARK @ HERITAGE EAST ZONE ATLAS/DRNG. FILE #: D-20/D3B1

LEGAL DESCRIPTION: 4.75 AC. PARK IN HERITAGE EAST UNIT FOUR

CITY ADDRESS: QUINTANA ROAD N.E.

ENGINEERING FIRM: ISAACSON & ARFMAN, P.A. CONTACT: FRED ARFMAN

ADDRESS: 128 MONROE ST. N.E. PHONE: 268-8828

OWNER: CITY PARKS & RECREATION CONTACT: DANNY MITCHELL

ADDRESS: PHONE: 857-8637

ARCHITECT: DENNIS C. WILKINSON & ASSOC. CONTACT: DENNIS WILKINSON

ADDRESS: PHONE: 897-7430

SURVEYOR: GEORGE J. MARQUEZ CONTACT: GEORGE MARQUEZ

ADDRESS: PHONE:

CONTRACTOR: TO BE DETERMINED CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

___ YES

X NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ___

EPC NO. ___

PROJ. NO. ___

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN (MINOR DRC REVISIONS)

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X WITH SUPPLEMENTAL DRAINAGE CALCULATIONS ATTACHED (PREVIOUSLY SUBMITTED)

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

X OTHER WORK ORDER (SPECIFY)

DATE SUBMITTED: ~~SEPT. 6, 1991~~ SEPT. 26, 1991 11-12-91

BY: FRED ARFMAN, P.E.

NOV 1 2

HYDROLOGY

25 x 10

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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 30, 1991

Fred Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street, NE
Albuquerque, New Mexico 87108

RE: DRAINAGE PLAN FOR ROTARY PARK AT HERITAGE EAST (D-20/D3B1)
ENGINEER'S STAMP DATED SEPTEMBER 18, 1991

Dear Mr. Arfman:

Based on the information provided on the referenced submittal received September 30, 1991, the plan is approved for Grading/Paving permit approval.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
Civil Engineer/Hydrology

GA
wp+2939

25 x 10

DRAINAGE INFORMATION SHEET

PROJECT TITLE: ROTARY PARK @ HERITAGE EAST ZONE ATLAS/DRNG. FILE #: D-20

LEGAL DESCRIPTION: 4.75 AC. PARK IN HERITAGE EAST UNIT FOUR

CITY ADDRESS: QUINTANA ROAD N.E.

ENGINEERING FIRM: ISAACSON & ARFMAN, P.A. CONTACT: FRED ARFMAN

ADDRESS: 128 MONROE ST. N.E. PHONE: 268-8828

OWNER: CITY PARKS & RECREATION CONTACT: DANNY MITCHELL

ADDRESS: PHONE: 857-8637

ARCHITECT: DENNIS C. WILKINSON & ASSOC. CONTACT: DENNIS WILKINSON

ADDRESS: PHONE: 897-7430

SURVEYOR: GEORGE J. MARQUEZ CONTACT: GEORGE MARQUEZ

ADDRESS: PHONE:

CONTRACTOR: TO BE DETERMINED CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

___ YES

X NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO.

EPC NO.

PROJ. NO.

RECEIVED SEP 30 1991 HYDROLOGY DIVISION

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X WITH SUPPLEMENTAL DRAINAGE CALCULATIONS ATTACHED

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___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

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___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

X OTHER WORK ORDER (SPECIFY)

DATE SUBMITTED: ~~SEPT. 6, 1991~~ SEPT. 26, 1991

BY: FRED ARFMAN, P.E.

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9/23/91

Fred Arfuian said he will make new resubmittal at end of week

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DRAINAGE INFORMATION SHEET

PROJECT TITLE: ROTARY PARK @ HERITAGE EAST ZONE ATLAS/DRNG. FILE #: D-20/D3B1

LEGAL DESCRIPTION: 4.75 AC. PARK IN HERITAGE EAST UNIT FOUR

CITY ADDRESS: QUINTANA ROAD N.E.

ENGINEERING FIRM: ISAACSON & ARFMAN, PA CONTACT: FRED ARFMAN

ADDRESS: 128 MONROE ST. N.E. PHONE: 268-8828

OWNER: CITY PARKS & RECREATION CONTACT: DANNY MITCHELL

ADDRESS: PHONE: 857-8637

ARCHITECT: DENNIS C. WILKINSON & ASSOC. CONTACT: DENNIS WILKINSON

ADDRESS: PHONE: 897-7430

SURVEYOR: GEORGE J. MARQUEZ CONTACT: GEORGE MARQUEZ

ADDRESS: PHONE:

CONTRACTOR: TO BE DETERMINED CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

___ YES

X NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ___

EPC NO. ___

PROJ. NO. ___

wp + 2939

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X WITH SUPPLEMENTAL DRAINAGE CALCULATIONS ATTACHED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

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X BUILDING PERMIT APPROVAL

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___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

X GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

SEP 6 1991

DATE SUBMITTED: SEPT. 6, 1991

BY: FRED ARFMAN, P.E.

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SEP 6 1991

LOCATION & DESCRIPTION

ROTARY PARK AT HERITAGE EAST IS LOCATED ALONG THE NORTHEASTERLY RIGHT-OF-WAY LINE OF QUINTANA DRIVE, NE, APPROXIMATELY 1,200 FEET EAST OF VENTURA STREET, NE. EXISTING RESIDENTIAL DEVELOPMENTS BORDER ON THE NORTHWEST AND SOUTHEAST WHILE THE DRAINAGE RIGHT-OF-WAY FOR THE DOMINGO BACA CHANNEL LIES TO THE NORTHEAST.

THE PARK LAND CONSISTS OF 4.75 ACRES OF UNDEVELOPED AND MOSTLY UNDISTURBED NATIVE LAND CHARACTERISTICS.

DRAINAGE CHARACTERISTICS

(EXISTING): THE PARK IS SURROUNDED BY THE FULLY DEVELOPED IMPROVEMENTS AS DESCRIBED ABOVE. THE SITE DOES NOT ACCEPT ANY OFFSITE STORM WATER. PRELIMINARY GRADES WERE ESTABLISHED BY THE MASTER GRADING PLAN FOR HERITAGE EAST UNIT FOUR BUT NO MAJOR GRADING IMPROVEMENTS HAVE BEEN IMPLEMENTED.

STORM WATERS GENERATED ONSITE SHEET FLOW AND/OR GULLEY FLOW TO THE NORTHWEST AND ARE THEN DIVERTED SOUTHWESTERLY, BEING PARALLEL AND ADJACENT TO LOT 1, BLOCK 8, OF HERITAGE EAST UNIT FIVE TO QUINTANA DRIVE. AT THAT POINT ALL STORM WATER FLOWS ARE ACCEPTED ONTO THE DRIVING SURFACE OF THE ROADWAY. STORM WATERS ARE CONVEYED BY SURFACE FLOW APPROXIMATELY 800 FEET TO THE NORTHWEST WHERE THEY ARE ACCEPTED BY A BATTERY OF DROP INLETS OF A STORM DRAIN WHICH CONNECTS TO THE EXISTING DOMINGO BACA DRAINAGE CHANNEL.

HYDROLOGY (EXISTING):
ROTARY PARK AT HERITAGE EAST IS WITHIN THE BOUNDARIES OF PARTICIPATION ZONE NO. 3, (EAST OF SAN MATEO BLVD.). AS SUCH THE P_{360} (6 HR.-100 YEAR STORM) HAS A DEPTH OF 2.60 INCHES.

THE TOTAL ONSITE DRAINAGE AREA IS COMPRISED OF THE PARK'S 4.75 ACRES OF VACANT AND MOSTLY UNDISTURBED LAND AND HAS A CORRESPONDING LAND TREATMENT A CLASSIFICATION.

PEAK DISCHARGE (USING A 10-MINUTE TIME OF CONCENTRATION), CFS/AC 100 YR., ZONE 3 (TABLE 9) = 1.64 CFS/AC.

DETERMINE TOTAL Q_P: $= Q_{PA} A_A$
$= (1.64)(4.75)$
$= 7.8$ CFS

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PROPOSED IMPROVEMENTS

ROTARY PARK SHALL BE GRADED TO CREATE A CENTRAL, SLIGHTLY SLOPED (2%), GRASSED PLAY AREA SURROUNDED BY OTHER PARK AMENITIES SUCH AS A HANDICAPPED ACCESSIBLE PLAYGROUND EQUIPMENT, WALKING AND BIKE TRAILS, LANDSCAPING ELEMENTS, NATIVE LANDSCAPING AREAS AND A SMALL PARKING LOT.

HYDROLOGY (PROPOSED):

THE PARK SHALL BE DIVIDED INTO FOUR SUB-DRAINAGE AREAS, DESIGNATED AS A THROUGH D. THE FOLLOWING TABLE CONTAINS THE COMPUTATIONAL DATA AND RESULTS OF EACH BASIN USING THE CRITERIA ESTABLISHED BY SECTION 22.2, HYDROLOGY OF THE D.P.M., VOLUME 2--DESIGN CRITERIA, DATED JANUARY 1991.

DEVELOPED RUNOFF RESULTS

DRAINAGE BASIN	AREA	LAND TREATMENT	$Q_{P(CFS)}$	W + E (IN.)	VOLUME
A	0.77 AC. 0.35 AC. 0.42 AC.	 B C	2.23	1.03	2,882 CU.FT.
B	2.29 AC. 2.14 AC. 0.15 AC.	 B D	5.93	0.93	7,716 CU.FT.
C	0.95 AC.	C	3.13		4,585 CU.FT.
D	0.45 AC. 0.35 AC. 0.10 AC.	 B C	1.18	0.91	1,490 CU.FT.
OTHER	0.29 AC.	THESE AREAS DO NOT HAVE AN OUTFALL FOR THOSE STORM WATERS GENERATED WITHIN THEIR LIMITS DUE TO THEIR PARK FUNCTION.			
TOTALS:	4.75 AC.		12.5 CFS		16,685 CU.FT.

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PLANS/PLATS ON FILE

FILE DESC: D20/D3B1

PLANS/PLATS 1

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